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Indian Standard

DIMENSIONS OF CONNECTORS FOR RADIO BATTERIES

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DIMENSIONS OF CONNECTORS FOR RADIO BATTERIES

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Indian Standard

DIMENSIONS OF CONNECTORS FOR RADIO BATTERIES

0. FOREWORD

0.1 This Indian Standard was adopted by the Indian Standards Institution on 21 October 1964, after the draft finalized by the Electronic Components Sectional Committee had been approved by the Electrotechnical Division Council.

0.2 A number of Indian Standards on primary cells and batteries, including batteries for radio and electronic equipment, has already been published. These Indian Standards lay down, among other things, the requirements of the terminals which will take the connecting plugs attached to the instrument or equipment with which the battery is used. In order to ensure proper matching of the plugs to the battery terminals, the need had been felt for preparing suitable specifications for these corresponding connectors, particularly their dimensional requirements.

0.3 This standard is intended mainly to assist the manufacturers and buyers of such connectors to conform to the correct dimensions to ensure correct matching with terminals specified for radio batteries in IS : 2652-1964*. The dimensions given in this standard are in line with the draft recommendations of IEC contained in Doc: 48 (Central Office) 17 Connectors for frequencies below 3MHz (Mc/s) and 48 (Central Office) 34 Amendments to document 48 (Central Office) 17 except in the case of connector for the 9 V battery commonly used with transistorized radio equipment. In this particular case, the new polarized design incorporating a third pilot pin has been included to avoid accidental plugging-in of the connector into electric supply mains.

0.4 Detailed tests and other requirements of connectors mentioned in this standard will be the subject of a separate specification.

1. SCOPE

1.1 This standard covers the dimensional requirements of connectors intended for use with primary batteries.

2. PLUG-IN PIN CONNECTORS

2.1 The arrangement of pins and the dimensions for plug-in type of pin connectors used with primary batteries shall be as given in Fig. 1 to 8.

---

*Schedule of terminals for leclanché type primary batteries.

2.2 Details of Pin Ends — The end of the pin in the case of plug-in pin connectors shall be in accordance with Fig. 9 and the dimensions given in the table thereunder.

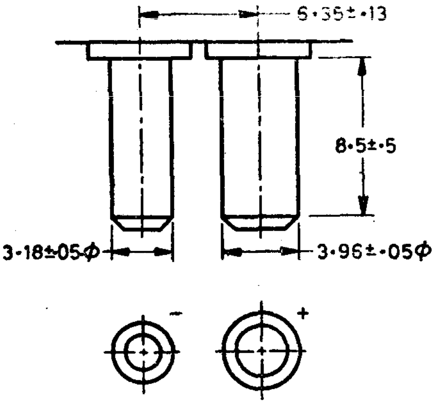
3. SNAP FASTENER CONNECTORS

3.1 Spacing of Contacts — The spacings between the stud and the socket for various voltages are given in the following table and apply from centre to centre. The stud always forms the positive terminal and the socket the negative terminal on the battery.

Battery Voltage	*Spacing of Contacts*	
	Normal	Miniature
V	mm	mm
9	35 ± 0·4	12·7 ± 0·25
45	38·1 ± 0·4	—
67·5	38·1 ± 0·4	—
90	63·5 ± 0·4	—

3.2 Non-resilient Snap Fastener Connectors (Studs) — The shape and dimensions of non-resilient snap fastener connectors shall be as shown in Fig. 10 for the normal type and Fig. 11 for the miniature type.

3.3 Gauges for Snap Fastener Connectors — The maximum and minimum size gauge for normal size snap fastener connectors shall conform to the dimensions given in Fig. 12 and Fig. 13 respectively. The maximum and minimum size gauge for miniature size snap fastener connectors shall be in accordance with Fig. 14 and Fig. 15 respectively.



All dimensions in millimetres.

Fig. 1 Connector for 1·5 V Battery

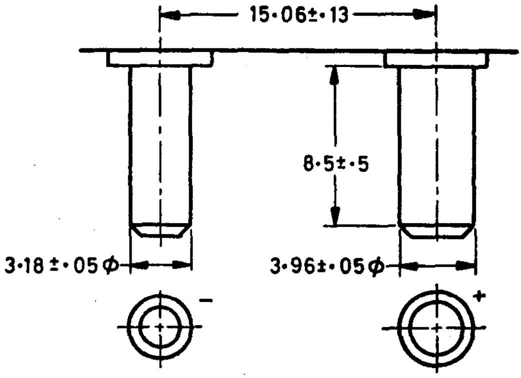


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FIG. 2 CONNECTOR FOR 3·0 V BATTERY

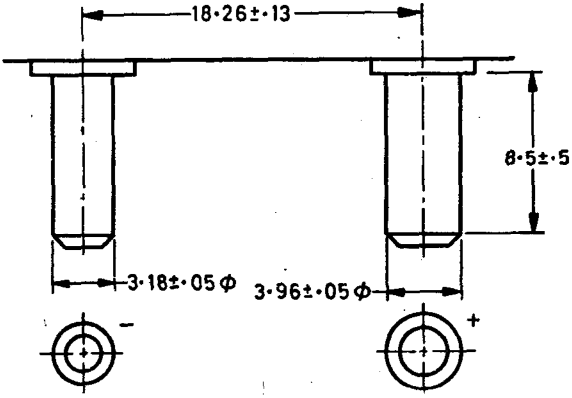

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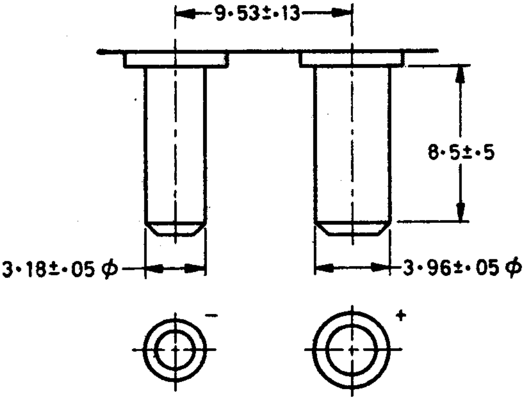
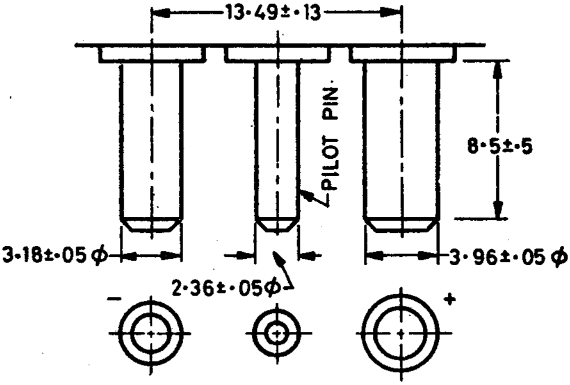
FIG. 3 CONNECTOR FOR 4·5 V BATTERY



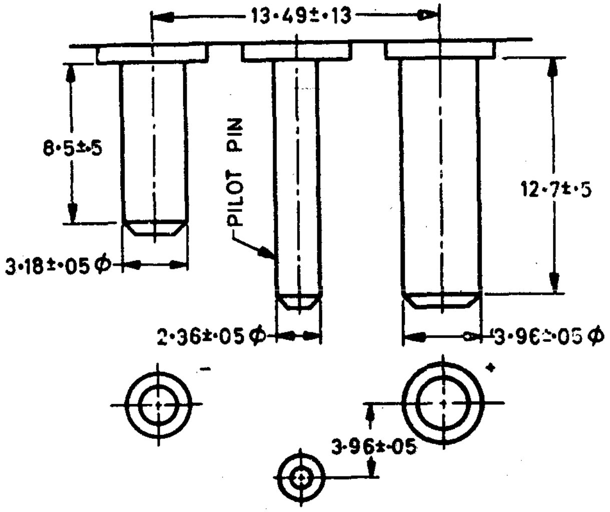
All dimensions in millimetres.

FIG. 4 CONNECTOR FOR 6 V BATTERY



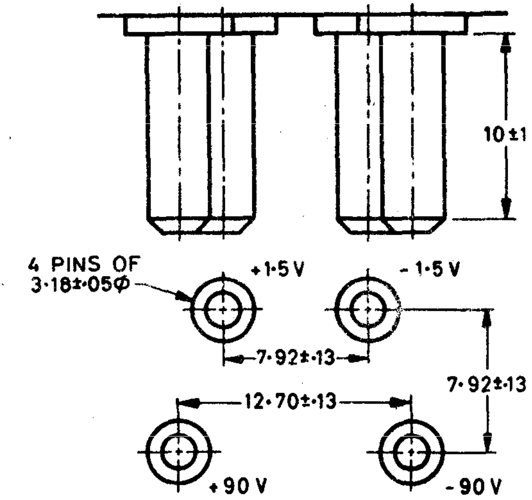
All dimensions in millimetres.

FIG. 5 CONNECTOR FOR 7·5 V BATTERY



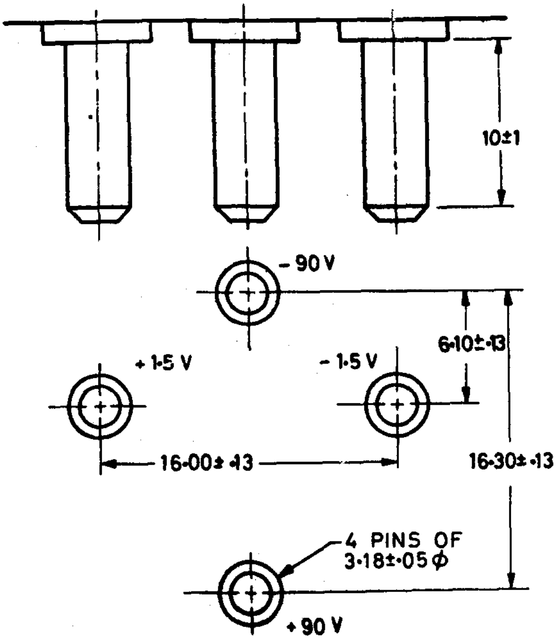
All dimensions in millimetres.

Fig. 6 Connector for 9·0 V Battery



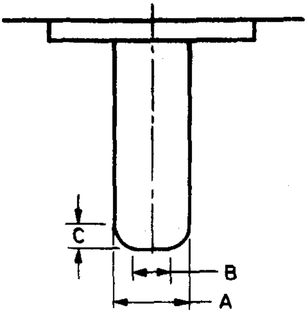
All dimensions in millimetres.

Fig. 7 Connector for Pack Battery 1·5 V, 90 V



All dimensions in millimetres.

FIG. 8 ALTERNATIVE CONNECTOR FOR PACK BATTERY 1·5 V, 90V

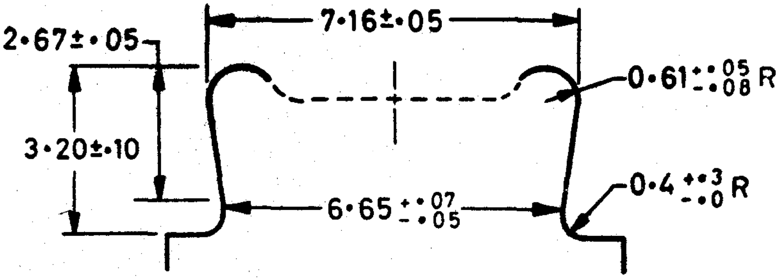


A	*B*	*C*
2·36 ± ·05	1·52 *Max*	0·76 to 1·65
3·18 ± ·05	1·90 *Max*	1·02 to 2·16
3·96 ± ·05	2·54 *Max*	1·27 to 2·54

NOTE — On finished article 0·75 mm may be added to the pin length for solder.

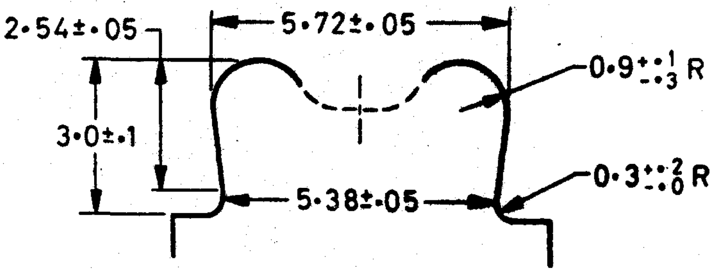
All dimensions in millimetres.

FIG. 9 DETAILS OF PIN ENDS



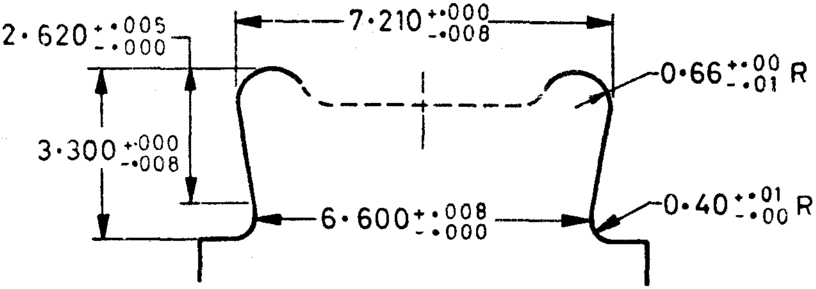
All dimensions in millimetres.

Fig. 10 Non-resilient Normal Snap-Fastener Connectors (Studs)



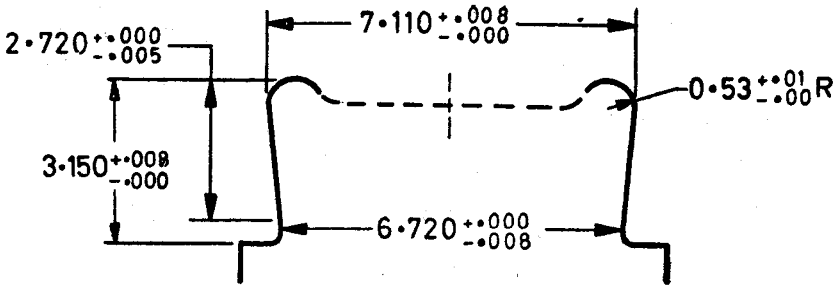
All dimensions in millimetres.

Fig. 11 Non-resilient Miniature Snap-Fastener Connectors (Studs)



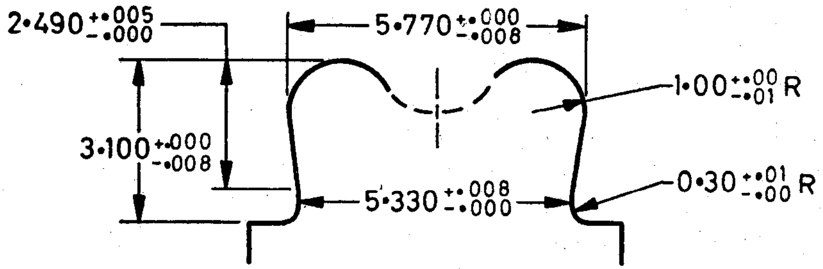
All dimensions in millimetres.

Fig. 12 Maximum Size Gauge for Non-resilient Snap-Fastener (Normal)



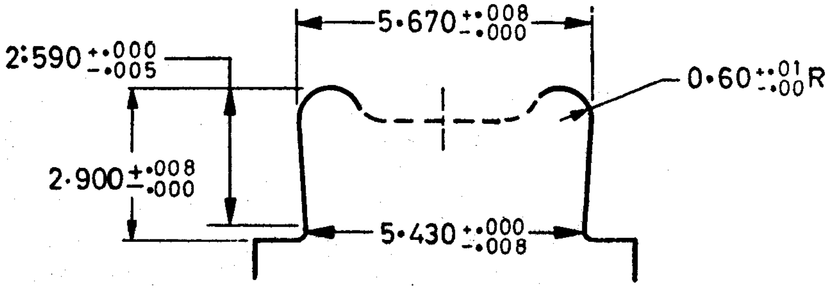
All dimensions in millimetres.

FIG. 13 MINIMUM SIZE GAUGE FOR NON-RESILIENT SNAP-FASTENER (NORMAL)



All dimensions in millimetres.

FIG. 14 MAXIMUM SIZE GAUGE FOR NON-RESILIENT SNAP-FASTENER (MINIATURE)



All dimensions in millimetres.

FIG. 15 MINIMUM SIZE GAUGE FOR NON-RESILIENT SNAP-FASTENER (MINIATURE)

INTERNATIONAL SYSTEM OF UNITS (SI UNITS)

Base Units

QUANTITY	UNIT	SYMBOL
Length	metre	m
Mass	kilogram	kg
Time	second	s
Electric current	ampere	A
Thermodynamic temperature	kelvin	K
Luminous intensity	candela	cd
Amount of substance	mole	mol

Supplementary Units

QUANTITY	UNIT	SYMBOL
Plane angle	radian	rad
Solid angle	steradian	sr

Derived Units

QUANTITY	UNIT	SYMBOL	DEFINITION
Force	newton	N	1 N = 1 $kg.m/s^2$
Energy	joule	J	1 J = 1 N.m
Power	watt	W	1 W = 1 J/s
Flux	weber	Wb	1 Wb = 1 V.s
Flux density	tesla	T	1 T = 1 Wb/m^2
Frequency	hertz	Hz	1 Hz = 1 c/s (s^{-1})
Electric conductance	siemens	S	1 S = 1 A/V
Electromotive force	volt	V	1 V = 1 W/A
Pressure, stress	pascal	Pa	1 Pa = 1 N/m^2

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